



Established 1881

Volume 134, Number 48

WEATHER, p. 2

TUE 62°F | 53°F
Overcast

WED: 58°F | 52°F
Rainy

THU: 59°F | 52°F
Rainy

Tuesday, October 21, 2014



Michael Anderson accepts his Darwin statue on Sunday night at BAHFest East, which was held at Kresge for the second year in a row. Six presenters defended their favorite Bad Ad hoc Hypotheses (BAH) explaining a certain phenomenon as being a result of evolutionary adaptation. Anderson was chosen by a combination of judges' votes and audience applause. In addition to the doubtful looking Darwin, Anderson took home a \$500 prize.

More mental health visits Increase in MH&C calls following Sept. deaths

By Rohan Banerjee

STAFF REPORTER

In the wake of recent campus deaths, students have been seeking mental health services in greater numbers, part of a general increase in mental health-related visits over the last five years, according to Alan E. Siegel, Chief of MIT's Mental Health Service.

According to Siegel, one major change that he has witnessed recently has been the increase in the number of calls to MIT

Mental Health & Counseling (MH&C). This past September, MH&C received 27 calls, compared to 12 in September 2013 and 5 in September 2012. Siegel attributed this increase in calls to the aftermath of the September deaths of Phoebe Wang '17 and graduate student Austin Travis.

Siegel said that over the last five years, more students have taken advantage of the MIT MH&C services. From 2008 through 2013, the total number of under-

Mental Health, Page 8

Close races mark freshman elections Over half of the Class of 2018 participated in presidential election

By Drew Bent

STAFF REPORTER

The Undergraduate Association released the results of the 2018 Class Council elections in an email sent to all freshmen on Friday. The class elected Colin O. Webb '18 as president and Daysi N. Gomez '18 as vice president.

The elections saw several close races, according to data provided by the UA. In the preferential voting

system used by the UA, students can rank all of the candidates. In elections for four out of the six positions this year, the winners won by 30 or fewer votes, as determined by the preferential system.

In the election for vice president, only five votes out of 533 separated the winner, Gomez, from the runner-up, Nick R. Schwartz '18. Similarly, with the election for publicity chair, the winning ticket came out only eight votes ahead

of the runner-up among 464 voters for that position.

Voter turnout this year was especially high. In the presidential election, 575 students voted. This is 55 percent of the freshman class, compared with 45 percent total voter turnout the year before and 41 percent in 2012. In 2011, only 34 percent of freshmen voted.

Class of 2015 President Joanne Y.

Elections, Page 9



A Bell 429 GlobalRanger takes off from Briggs Field as part of a networking event hosted by the company this past Friday.

ASE pass rates up for most GIRs, especially biology *Math GIR tests still passed by most, but 18.01 sees slightly less success than in previous years*

By Czarina Lao

The Advance Standing Exam (ASE) takers, mostly students from the Class of 2018, generally did well on the tests during orientation this year, garnering an overall pass rate of 54.9 percent. This pass rate is slightly higher than last year's 54.2 percent and 52-53 percent in recent years.

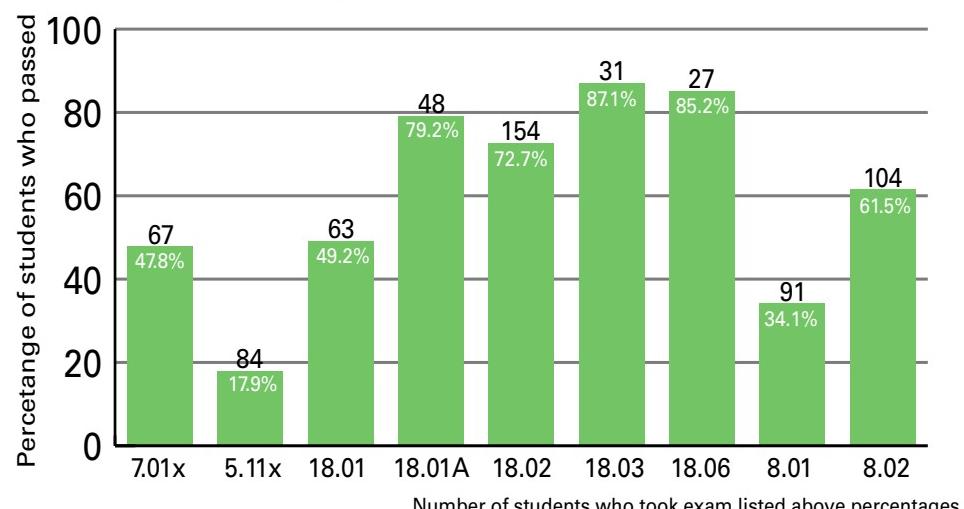
The ASEs are offered during orientation, as

part of each semester's finals schedule, and at the end of IAP. However, only the ASEs taken by freshmen during orientation will not affect those students' transcripts.

The ASE-takers performed especially well in the biology ASE, where 32 out of 67 students, or 47.8 percent, passed. This is significantly higher than the past two years' average of around 27.2 percent.

ASE, Page 10

Advanced Standing Examinations Pass Rates for Fall 2014



INFOGRAPHIC BY LENNY MARTINEZ AND JUSTINE CHENG

White House nominates AeroAstro Professor for top NASA position

Dava Newman PhD '92, Professor of Aeronautics and Astronautics and Housemaster of Baker House, was recently nominated by President Obama to be NASA's deputy administrator.

Deputy administrator is NASA's second highest leadership position. According to NASA's website, the deputy administrator "represents NASA to the Executive Office of the President, Congress, heads of federal and other appropriate government agencies, international organiza-

tions, and external organizations and communities." Newman's appointment is awaiting approval by the U.S. Senate.

Newman has been on the MIT faculty since 1993. She currently serves as the director of MIT's Technology and Policy Program as well as the MIT Portugal Program. She is a faculty member in the Harvard-MIT Division of Health Sciences and Technology, and a Margaret McVicar Faculty

Newman, Page 8

IN SHORT

MIT Medical will be administering flu shots tomorrow, Oct. 22 in Walker Memorial Lobby from 10 a.m. to 4 p.m. The clinic is walk-in — no appointment is needed. Children 9 and under are not eligible for the walk-in clinic in Cambridge and should schedule an appointment for their immunizations.

Wi-Fi networks MIT N and MIT SECURE N to be phased out on Monday, Oct. 27. Networks MIT and MIT SECURE will be the networks of choice. IS&T says it will also contact users again before the changes take effect.

The deadline to submit a Scope Statement to the Global Ideas Challenge is tomorrow, Oct. 22 at 6 p.m. Students working on an innovative project striving to make a positive change in the world are eligible to apply for a Development Grant.

Send news information and tips to news@tech.mit.edu.

MENS ET MANUS

Do MIT students care about their world?
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BALLROOM BEGINNERS SWEEP

Take half of all finals placements.

SPORTS, p. 11

WOMEN'S SOCCER WINS

Team beats Smith 2-0.

SPORTS, p. 11



ULTIMATE FEEL-GOOD MOVIE

Melfi's St. Vincent is touching.

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TECHDOKU

No better way to celebrate a Tuesday

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WHO declares Nigeria free of Ebola

GENEVA — The World Health Organization declared Nigeria, Africa's most populous nation, officially free of Ebola infections on Monday, calling the outcome the triumphal result of "world class epidemiological detective work."

The announcement came 42 days after the last reported infection in Nigeria's outbreak, twice the maximum incubation period for the Ebola virus.

The Nigerian response was upheld by the WHO as an example of the measures other countries can take to halt the spread of the epidemic, which is concentrated in the three West African countries Guinea, Liberia and Sierra Leone.

"This is a spectacular success story that shows that Ebola can be contained," WHO said in a report on its website. But it also expressed caution that Nigeria cannot relax its defenses against the deadly virus.

More than 9,000 people have become infected and more than 4,500 people have died in the epidemic, and the number of infections is still doubling every month, WHO has reported.

Still, Nigeria, like Senegal, which was declared free of Ebola on Friday, is susceptible to new cases by virtue of its proximity to the West African epicenter, health authorities warn.

Nigeria also is at risk of becoming a victim of its own success. WHO's representative in Nigeria, Rui Gama Vaz, said Ebola patients in the epicenter may now seek entry to Nigeria in an effort to get lifesaving care.

"Many desperate people in heavily affected countries believe that Nigeria must have some especially good — maybe even 'magical' — treatments to offer," a WHO statement said.

—Nick Cumming-Bruce, *The New York Times*

US airdrops weapons and supplies to Kurds fighting in Kobani

WASHINGTON — Escalating its assistance to Kurdish fighters battling the Islamic State in the Syrian town of Kobani, U.S. military aircraft on Sunday dropped ammunition, small arms and medical supplies to resupply the combatants, officials said.

The United States and its Arab allies have conducted more than 135 airstrikes in and around Kobani in the past two weeks to help slow the advance of hundreds of Islamic State fighters on the town along the Turkish border.

But in a sign of the symbolic significance of the town to both sides, three U.S. C-130 transport planes for the first time dropped 27 bundles of supplies provided by Iraqi Kurdish authorities to help the Syrian Kurds continue to resist the militant attempts to seize it, U.S. officials said late Sunday.

The aircraft flew without fighter escort, faced no hostile ground fire, and left the airdrop zone safely, U.S. officials said.

"There was an urgent need to resupply," a senior Obama administration official said in a hastily organized conference call Sunday night. "This was the quickest way to get the job done."

When Kobani first came under attack several days ago, U.S. officials said the fight for the town was not part of the coalition's strategic campaign to weaken the Islamic State by attacking its oil refineries, headquarters and arms depots in Syria — all a part of the militant group's ability to sustain its fight in neighboring Iraq. U.S. officials appealed in vain for Turkey to deploy its sizable force just across the border to help.

But in the past few days, the Islamic State has poured heavily armed reinforcements into Kobani, providing allied warplanes with an array of targets — tanks, artillery and armored vehicles, Pentagon officials said.

Combined with resistance to Islamic State on the ground, U.S. officials said, the airstrikes had slowed the militant advances into Kobani, killed hundreds of fighters and destroyed or damaged weaponry and fighters' positions.

—Eric Schmitt, *The New York Times*

Hong Kong leader reaffirms tough stance on elections

By Keith Bradsher and Chris Buckley
THE NEW YORK TIMES

HONG KONG — The Beijing-appointed leader of Hong Kong, Leung Chun-ying, said Monday that allowing his successors to be chosen in open elections based on who won the greatest number of votes was unacceptable in part because it risked giving poorer residents a dominant voice in politics.

Leung gave the warning in a broad-ranging defense of his government's handling of pro-democracy protests that have wracked the city for more than three weeks. He acknowledged that many protesters were angered by the city's lack of social mobility and affordable housing but argued that containing populist pressures was an important reason for resisting protesters' demands.

Instead, he offered a firm defense of Beijing's position that candidates to succeed him must be screened by a "broadly repre-

sentative" nominating committee, which would insulate Hong Kong's next chief executive from popular pressure to create a welfare state and allow the government to implement more business-friendly policies to address economic inequality.

Leung's blunt remarks — which seemed to reflect a commonly held view among the Hong Kong elite that the general public cannot be trusted to govern the city well — appeared likely to draw fresh criticism from the democratic opposition and to inflame the street struggle over Hong Kong's political future, which has been fueled in part by economic discontent, especially among younger residents.

He spoke on the eve of talks, scheduled to be televised, between his government and student leaders, who have portrayed him as defending a political system stacked against ordinary citizens.

Leung said that if "you look at the meaning of the words 'broadly representative,' it's not numeric

representation."

Leung, whom the Chinese Communist Party's leadership has repeatedly endorsed, argued that remedying social grievances should be left to policies like expanding the supply of housing and spurring economic growth as a cure for stagnating upward mobility. He stressed the importance of maintaining the confidence of Hong Kong's corporate elite, pointing out that the city's mini-constitution, the Basic Law, had been written a quarter-century ago partly with the goal of maintaining business confidence by containing public pressure for the creation of a European-style welfare state.

Leung raised again the suspicions of his government and of Beijing that "foreign forces" had played a role in the street protests, although he declined repeatedly to identify those forces or provide any examples.

"I didn't overhear it in a teahouse, and it's something that concerns us," he said. "It's something that we need to deal with."

Texas officials clear 43 people after Ebola monitoring

By Frances Robles
THE NEW YORK TIMES

DALLAS — More than three dozen people who were monitored for the past three weeks for possible contact with the Ebola virus were cleared Monday to return to work or school, leaving 133 others still being watched for symptoms of the disease, Dallas County officials said.

Forty-three people who had contact with Thomas Eric Duncan, a Liberian man who died Oct. 8 at a Texas hospital, did not develop symptoms and were being permitted to return to their everyday routines after waiting out the mandatory 21-day incubation period, Dallas officials said Monday.

The group includes eight schoolchildren, the Dallas schools superintendent, Mike Miles, said.

All the people whose contacts were traced to Duncan or Texas Health Presbyterian Hospital —

where two nurses, Nina Pham and Amber Joy Vinson, were infected — will end monitoring by Nov. 7, Texas officials said.

Another group — 13 people — were directed to stay home because they were seated near Vinson on commercial airline flights; she had traveled to Cleveland to organize her wedding.

Vinson's interactions with the county and federal health authorities continued to be a point of friction. Her family issued a statement Sunday clarifying that she had reported her temperature at least three times to the county health department.

Judge Clay Jenkins, the Dallas County chief executive, apologized Monday to Vinson, who was not prevented from flying on a commercial aircraft despite reporting an elevated temperature.

"I have repeatedly said that was a mistake," Jenkins said, adding that it caused panic and forced many peo-

ple to miss work and school.

Jenkins said the incident persuaded policymakers to move their operations to the hospital so they could be closer to such discussions.

"There is a thin line between science and policy," he said.

He urged the community to treat those leaving isolation with compassion and to resist the urge to regard them as dangerous disease vectors.

"Please treat these people with dignity," Jenkins said. "I am extremely concerned."

Jenkins insisted that the 43 people — Duncan's fiancée, her family, friends, health care workers and others who came into contact with him — are not a danger to the community.

"Having grown up around animals, I have seen herds of horses spooked by snakes. I have also seen them spooked by a bear can shining in the sun," Jenkins said. "This is more of a bear can than a snake."

WEATHER

Break out the umbrellas!

By Casey Hilgenbrink
STAFF METEOROLOGIST

It was a cool start to the week this week thanks to the passage of a cold front on Saturday evening. Boston's low temperature early Monday morning was a chilly 39°F (4°C), the coldest it's been in the city since April 21!

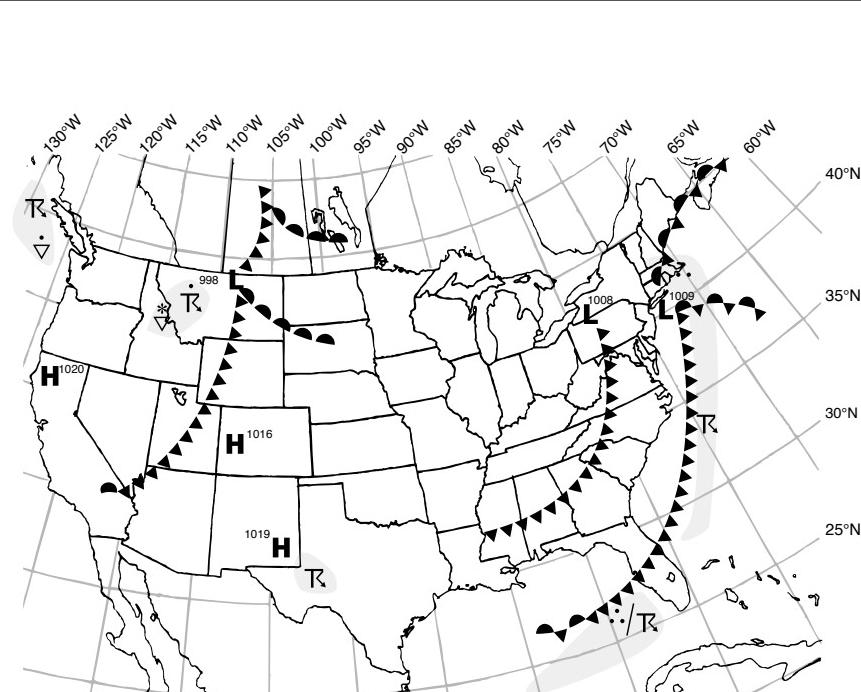
The main story this week is the long-lived coastal low pressure system that will dominate our weather for the remainder of the week. The low pressure system, which was situated over the Great Lakes region yesterday afternoon, is currently approaching our area from the west. Winds ahead of this system will be from the south, allowing con-

ditions in Cambridge to moisten and warm up to about 62°F (17°C) by late afternoon. There is a chance of showers in the morning ahead of the low, with rain becoming more likely by late morning/early afternoon.

This low pressure system will remain in our region on Wednesday and Thursday thanks to the fact that, at upper levels, it will be cut off from the fast-moving winds of the jet stream. Thus, widespread rain is likely on Wednesday and Thursday. The system will finally begin pushing out of the area on Friday morning, although there will still be a chance of showers Friday as it exits. All told, Cambridge could see rain totals in excess of an inch through the end of the week.

Extended Forecast

Today: Overcast, with a high of 62°F (17°C). Winds from the southeast at 5-10 mph. Rain showers likely.
Tonight: Overcast, with a low of 53°F (12°C). Winds from the north at 10 mph. Chance of rain.
Tomorrow: Overcast, with a high around 58°F (14°C). Winds from the northeast at around 10 mph, with gusts in the morning of up to 20 mph. Rain likely.
Thursday: Overcast. High in the upper 50s°F (14°C). Showers likely.
Friday: Overcast. High in the upper 50s°F (15°C). Chance of showers.



Gene variant may protect Hispanic women from cancer

By Anahad O'Connor
THE NEW YORK TIMES

A genetic variant that is particularly common in some Hispanic women with indigenous American ancestry appears to protect against breast cancer, a new study found.

About 1 in 5 U.S. Latinas carry one copy of the variant, and roughly 1 percent carry two.

The function of the gene is not entirely clear. But the authors of the study, which was led by a team at the University of California, San Francisco, and funded by the National Cancer Institute, said women who carry the variant have breast tissue that appears less dense on mammograms — a factor that is known to play a role in breast cancer risk. They suspect that the genetic variant may affect the production of estrogen receptors.

"This is a really important study," said Marc Hurlbert, executive director of the Avon Foundation Breast Cancer Crusade, who was not involved in the study. "If we can understand how this is protective, it might help us to develop better treatments for those who do get breast cancer."

The findings may also explain why Latinas have lower rates of breast cancer than other Americans. According to federal data, Hispanics have less than a 10 percent lifetime risk of breast cancer, compared with about 13 percent for non-Hispanic whites and 11 percent for blacks.

Certain behavioral factors have been thought to account for at least part of this reduced risk. Latinas, for example, are less likely to use post-menopausal hormones, and they tend to have more children and give birth at younger ages, said Dr. Elad Ziv, a professor of medicine at the university in San Francisco and an author of the new study, which was published in *Nature Communications*. Both factors may decrease breast cancer risk.

But Ziv and his colleagues suspected that genetic factors might also be at work. So they scanned and compared the DNA of breast cancer patients and control subjects in various populations, carrying out a so-called genome-wide association study that can link genetic variations to disease. Altogether the study analyzed DNA from more than 3,000 women with breast cancer and about 8,200 wom-

en without the disease.

Many genome-wide association studies have looked for associations with breast cancer in women of European descent. But this was the first such study to include large numbers of Latinas, who in this case hailed mostly from California, Colombia and Mexico, said the lead author of the study, Laura Fejerman of the Institute for Human Genetics in San Francisco.

The researchers zeroed in on chromosome 6 and discovered the protective variant, which is known as a single nucleotide polymorphism, or SNP (pronounced ("snip"). They also discovered that its frequency tracked with indigenous ancestry.

It occurred with about 15 percent frequency in Mexico, 10 percent in Colombia and 5 percent in Puerto Rico. But its frequency was below 1 percent in whites and blacks, and other studies have shown that it occurs in about 2 percent of Chinese people.

Women who carried just one copy of the variant were about 40 percent less likely to have breast cancer, while those with two copies had double that level of protection.

iPhone 6 propels Apple profit to record

SAN FRANCISCO — Apple's biggest cash cow, the iPhone, is gaining weight.

Sales of iPhones, including the new, big-screen iPhone 6 models released last month, helped carry Apple to a record-breaking quarter, with \$8.5 billion in profit, the company said Monday.

The company's profit for its fiscal fourth quarter was 13.3 percent higher than the same quarter a year ago. Revenue over the quarter was \$42.1 billion, up from \$37.4 billion in the same period last year.

Overall, Apple sold 39 million iPhones over the quarter, a significant bump from the 33.8 million it sold in the same period last year.

"Our fiscal 2014 was one for the record books, including the biggest iPhone launch ever with iPhone 6 and iPhone 6 Plus," Timothy D. Cook, Apple's chief executive, said in a statement.

The revenue was above the expectations of Wall Street analysts. They had expected revenue of \$39.9 billion, according to a survey of analysts by Thomson Reuters. Apple's \$1.42 per share profit also exceeded analyst expectations for \$1.31 a share.

Year after year, iPhone sales have steadily grown, even though overall sales of smartphones are slowing in developed markets like the United States and parts of Europe. To achieve growth, Apple recently made a series of aggressive moves with the iPhone. Last year, Apple for the first time released two new iPhone models instead of just one. Last month, Apple again released two new iPhones, this time with bigger screens.

The larger iPhone 6 and iPhone 6 Plus smartphones got a strong reaction early. In the first weekend that the new iPhones went on sale in September, Apple sold 10 million of the devices, up from the 9 million new iPhones sold last year on their opening weekend.

The story hasn't been the same for the iPad. The company on Monday said it sold 12.3 million iPads over the quarter, down from 14 million in the same quarter last year. The company's iPad sales were down in the previous quarter, too.

—Brian X. Chen, *The New York Times*

Pakistani government suspends license of broadcast network

ISLAMABAD, Pakistan — The Pakistani government on Monday suspended the license of ARY News, a broadcast network that has been sharply critical of Prime Minister Nawaz Sharif, in a move that was widely criticized by rights groups and journalists.

The Pakistan Electronic Media Regulatory Authority said the 15-day suspension was effective immediately. It also imposed a fine of 10 million rupees, or about \$97,000.

The regulatory body said in a statement that ARY had maligning the country's judiciary in an episode of the talk show "Khara Sach," which was critical of the court system and senior judges.

However, analysts said that the suspension seemed aimed at curtailing coverage by ARY that has been increasingly critical of Sharif and his government and party, particularly by the host of "Khara Sach," Mubashar Lucman, and other hosts on the network. Lucman has been on a self-professed campaign against Sharif's government, and in one TV appearance distributed candy after a politician allied with the government lost a by-election in central Pakistan.

"ARY TV must be immediately allowed back on air. There is simply no justification for the Pakistani authorities to silence sections of the media solely because of their political leanings," said Mustafa Qadri, a Pakistan researcher at Amnesty International.

"The ban on ARY is a sobering reminder of the threat of criminal prosecution on the basis of overly broad contempt of court or anti-state provisions," Qadri said. "Journalists in Pakistan are under attack from all sides, facing harassment, even abduction and killings for carrying out their work."

Monday's suspension was the second time this year that a major television news network has been silenced by a government order.

—Salman Masood, *The New York Times*

Nepal tragedy reverberates across borders

KATHMANDU, Nepal — In an incense-filled prayer room inside a Buddhist monastery here, more than a dozen lamas chanted and prayed beside the body of Ang Dorje Sherpa, a 36-year-old porter who died last Tuesday alongside two Slovakian clients when an avalanche engulfed their group at the base of the towering Dhaulagiri mountain.

Six days after a catastrophic storm bore down on a several trekking routes in Nepal's central Himalayan region, trapping scores of hikers, a spokesman for Nepal's home minister said Monday that there was "no one left to rescue" from the area and that workers had turned to recovering the bodies of the dead. He said that eight were still missing, trapped under at least 35 feet of snow.

Officials in three districts where bodies had been recovered in and around the popular Annapurna Circuit raised the death toll to 40 people, half of whom were Nepali.

As rescue efforts ended and travelers began slowly to return to Katmandu, the international dimension of the disaster and the toll it took on Nepali porters and guides came into focus. People from at least seven countries — Canada, India, Israel, Japan, Nepal, Poland and Slovakia — lost their lives. Travelers from many other nations were injured.

Because of the pull of the Himalayas, and the relative accessibility of the treks in and around the Annapurna Circuit, the tragedy reverberated across continents and contexts.

October is meant to offer the best and clearest trekking weather, but the climate has become less predictable recently.

"Seven people died — and we're only one story," said Paul Cech, 54, a computer animator from Vancouver who trekked in a group of four that included Tomlinson and Rooks and who escaped from the village of Phu.

—Nida Najar, *The New York Times*

Dozens are killed in attacks on Shiite targets in Iraq

By Kirk Semple
THE NEW YORK TIMES

BAGHDAD — Militants unleashed a flurry of deadly attacks against Shiite targets in Iraq on Monday, including a quadruple car bombing near two of the holiest shrines in Shiite Islam, and a suicide attack inside a mosque, officials said.

The four car bombs were detonated in Karbala on the periphery of a pedestrian-only area encircling the shrines of Imam Hussein and Imam Abbas, killing 22 and wounding 51, officials said.

Those attacks roughly coincided with a symbolically important meeting in Najaf, another holy Shiite city in southern Iraq, between Prime Minister Haider al-Abadi and Grand Ayatollah Ali al-Husseini al-Sistani, Iraq's top Shiite cleric. The meeting was widely viewed as a demonstration of support for al-Abadi. Al-Sistani had not met with al-Abadi's predecessor, Nouri al-Maliki, for the last

few years, which was interpreted by many as a sign of dissatisfaction with the administration.

No group immediately claimed responsibility for the attacks in Karbala but suspicion fell most heavily on the Sunni-led Islamic State, which has deployed car bombs and suicide bombers with increasing frequency in recent weeks, most often targeting Shiite neighborhoods.

Two of the cars were in parking lots where worshippers leave their vehicles before walking to the shrines, officials said. The other two were detonated along busy commercial streets, officials said.

Nusaif Jassim, head of the Karbala Provincial Council, said the attacks were "a response to the progress" of Iraqi security forces in pushing back the Islamic State in the area around Jurf al-Sakhr, a town strategically located on a corridor between Karbala and militant强holds in Anbar Province.

In Baghdad, a man shot and

killed a guard standing outside a small Shiite mosque crowded with worshippers during midday prayer, forced his way through the door and shot and killed the imam and a worshipper, witnesses and the authorities said. Then the man detonated an explosives belt concealed beneath his oversized shirt, killing another 15 and wounding 33, the authorities said.

Shortly after midnight, a firefight between a federal police unit and another armed group erupted along a darkened and otherwise empty boulevard of the Karrada neighborhood, Interior Ministry officials said.

Saad Maan, the spokesman, said police had converged on a hotel where "a gang" was holding a kidnapping victim. The woman had been kidnapped in Basra about two weeks ago and her captors were demanding a \$2.5 million ransom, officials said.

The woman escaped her captors during the shootout, Maan said.

WORLD & NATION

OPINION OPINION OPINION OPINION OPINION



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GUEST COLUMN

Implementing *Mens et Manus*

How can the Institute better integrate science and innovation with politics and community affairs?

By Brittany N. Montgomery
and Rebecca Heywood

On Tuesday, Sept. 30, *The Tech's* "Snapshot of the First Year Survey results for Class of 2018" revealed a startling paradox that has gone unmentioned: The Class of 2018 most desires to "Contribute to Science and Innovation" and least cares about "Participating in Politics or Community Affairs." But I ask: how one can expect his/her contributions to science and innovation to ever see the light of day (or the market) without understanding and participating in politics and community affairs? Let me be clear that I raise this not to fault the Class of 2018 (when we are 18 and fresh from high school there is much to learn in life), but to ask the greater MIT community, particularly our faculty, department heads, deans, and administrators: what does it mean to divorce scientific achievements from participation in public life?

What good is a contribution to science and innovation if not to better the human condition? Isn't that what MIT's motto, *Mens et Manus*, is all about? If we truly believe that the purpose of everything that we strive to accomplish at MIT is to improve human life and educate students for practical application, then what are we doing to prepare them for action in the messy real world? Failing to include politics and community affairs in our instruction of science, engineering, and innovation is like teach-

ing 18.03 (Differential Equations) without boundary conditions: infinite solutions, but none that are useful for applied problems.

The Institute prepares students well in the realms of science and engineering and has made a fair pass at incorporating the humanities into the undergraduate degree requirements, but it has not done enough to impart the necessity of understanding politics and society not just to its students, but also to its faculty and administration. Although MIT has many wonderful initiatives for public service, it is unclear how our motto influences the hiring and promotion of faculty members, as well as curriculum at all levels of study.

We are an institute of technology — not just science, but science + progress. We would be egotistical fools to believe that progress can made outside of the realm of politics and society. Politics and society are not just the realm of the Department of Urban Studies and Planning, or the Sloan School, as has been suggested by some in the School of Engineering. No department or research group lives in a vacuum. The world cannot afford for some of us simply say: let those people deal with the goings on of the public sphere. We must work together within and across schools and departments — engineers with planners and architects, natural scientists with social scientists and business people, academics with professionals.

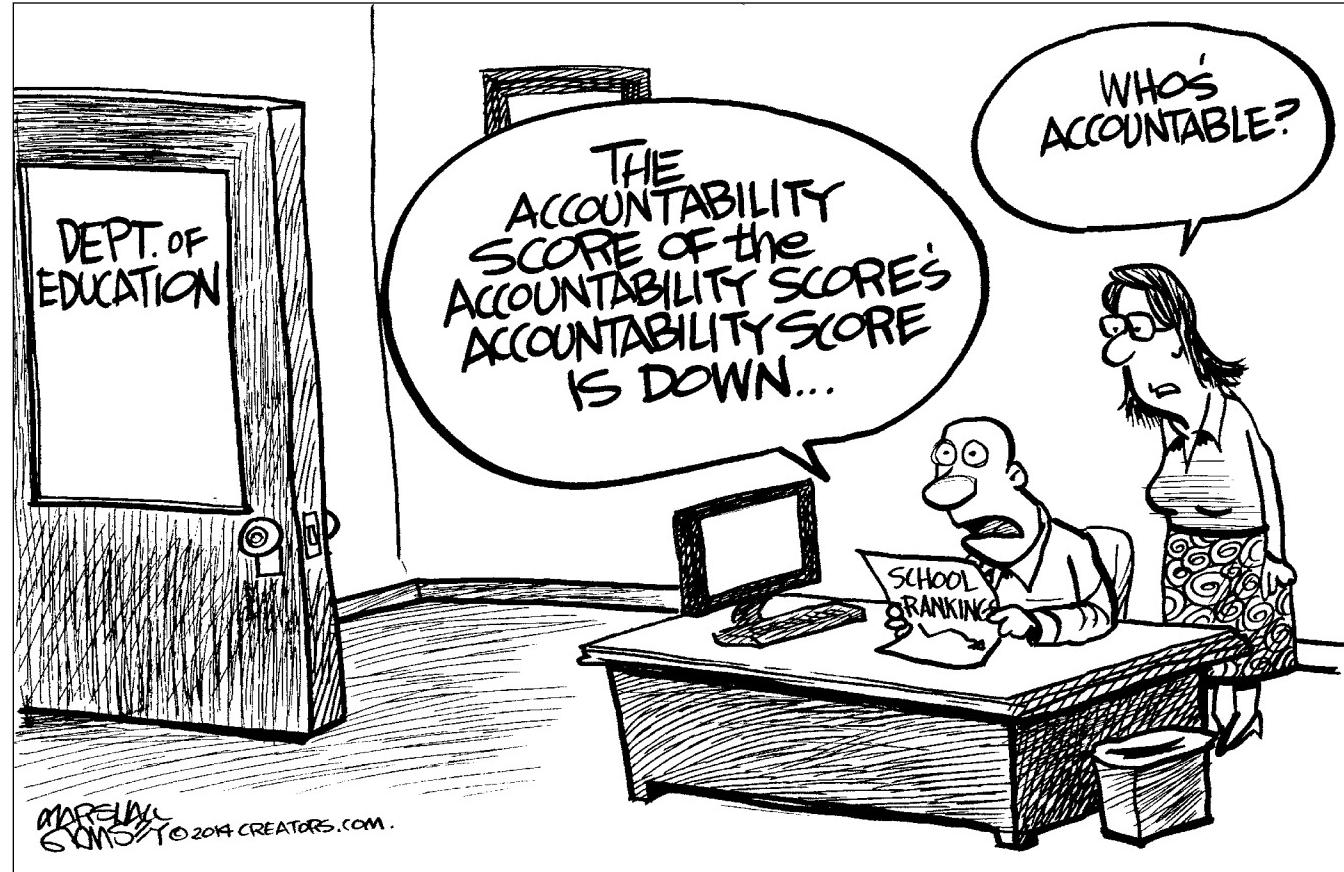
Lecturers and researchers with practical

experience beyond that of lifetime academics, but without the letters Ph.D. after their names, are an invaluable resource on campus. How will their systematic elimination from the faculty impact students' ability to affect change beyond the Academy? If we break the link between science/innovation and politics/community affairs, we will effectively revoke our mission to society, thereby transforming our motto into nothing more than a smug marketing ploy.

A genuine belief in *Mens et Manus* should drive the administration to better align its policies and actions with its motto. Rethinking these issues would be a positive start — the formal incentives that govern the hiring, promotion, and pay of tenure-track and non-tenure-track faculty; the barriers between departments that prevent interdisciplinary research; and the curriculum for both undergraduates and graduate students that largely neglects the role of politics and society in the implementation of technical solutions to real problems.

We owe it to the world to lead the way in solving its greatest challenges — challenges that inextricably link science and innovation to politics and community affairs.

Brittany N. Montgomery is a member of the Class of 2006 and a current Ph.D. student in the Department of Urban Studies and Planning. *Rebecca Heywood* is a member of the Class of 2012 and a current Masters student in the Department of Urban Studies and Planning.



CORRECTIONS

An article about Kendall Square plans in the Friday, Oct. 17 issue of *The Tech* misstated the provost's class year. He is Martin A. Schmidt PhD '88. The article also misstated the name of a Graduate Student Council committee. It is the Housing & Community Affairs committee, not the Housing Community Activities committee.

OPINION POLICY

Editorials are the official opinion of *The Tech*. They are written by the Editorial Board, which consists of Chairman Annia Pan, Editor in Chief Austin Hess, Managing Editor Judy Hsiang, and Opinion Editor Jacob London.

Dissents are the signed opinions of editorial board members choosing to publish their disagreement with the editorial.

Letters to the editor, columns, and editorial cartoons are written by individuals and represent the opinion of the author, not necessarily that of the newspaper. Electronic submissions are encouraged and should be sent to letters@tech.mit.edu. Hard copy submissions should be addressed to *The Tech*, P.O. Box 397029, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. All submissions are due by 4:30 p.m. two days before the date of publication.

Letters, columns, and cartoons must bear the authors' signatures, addresses, and phone numbers. Unsigned letters will not be accepted. *The Tech* reserves the right to edit or condense letters; shorter letters will be given higher priority.

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Guest columns are opinion articles submitted by members of the MIT or local community.

TO REACH US

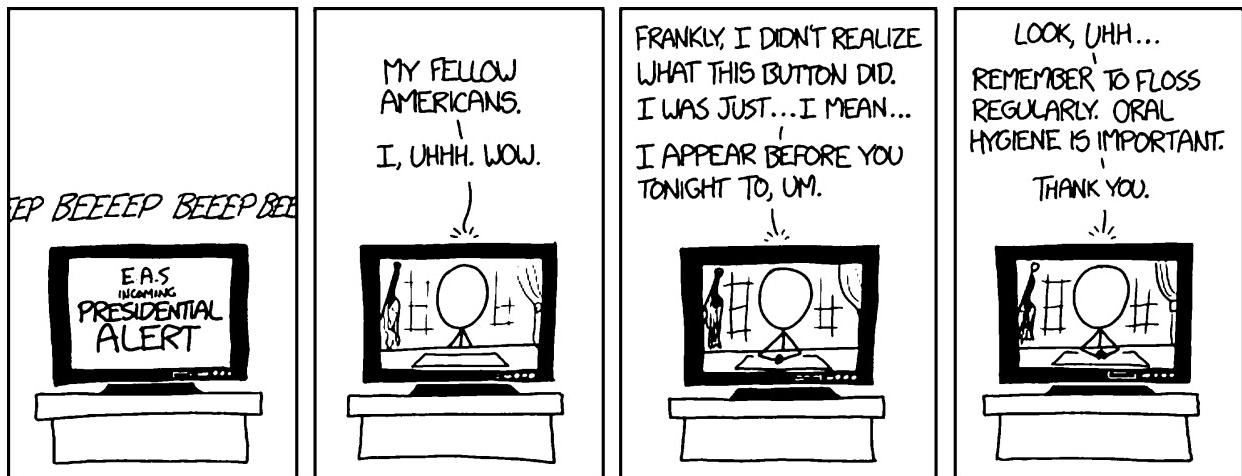
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**A WEBCOMIC OF ROMANCE,
SARCASM, MATH, AND LANGUAGE**

by Randall Munroe

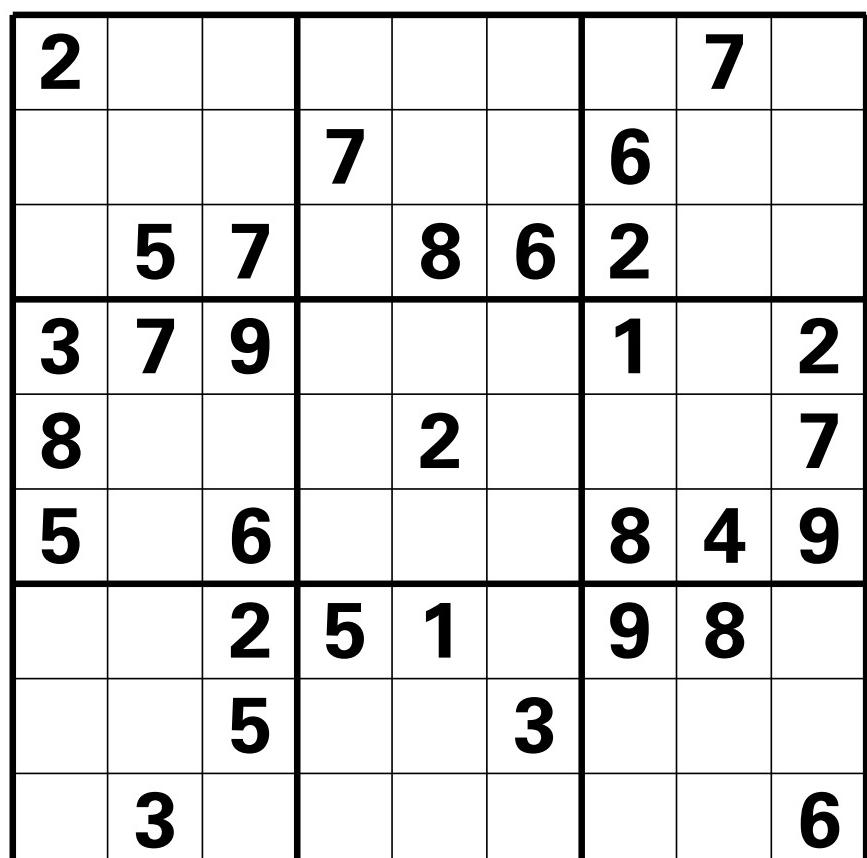
[1435] Presidential Alert



When putting his kids to bed, after saying 'Goodnight', Obama has to stop himself from saying 'God bless you', and God bless the United States of America.

Sudoku

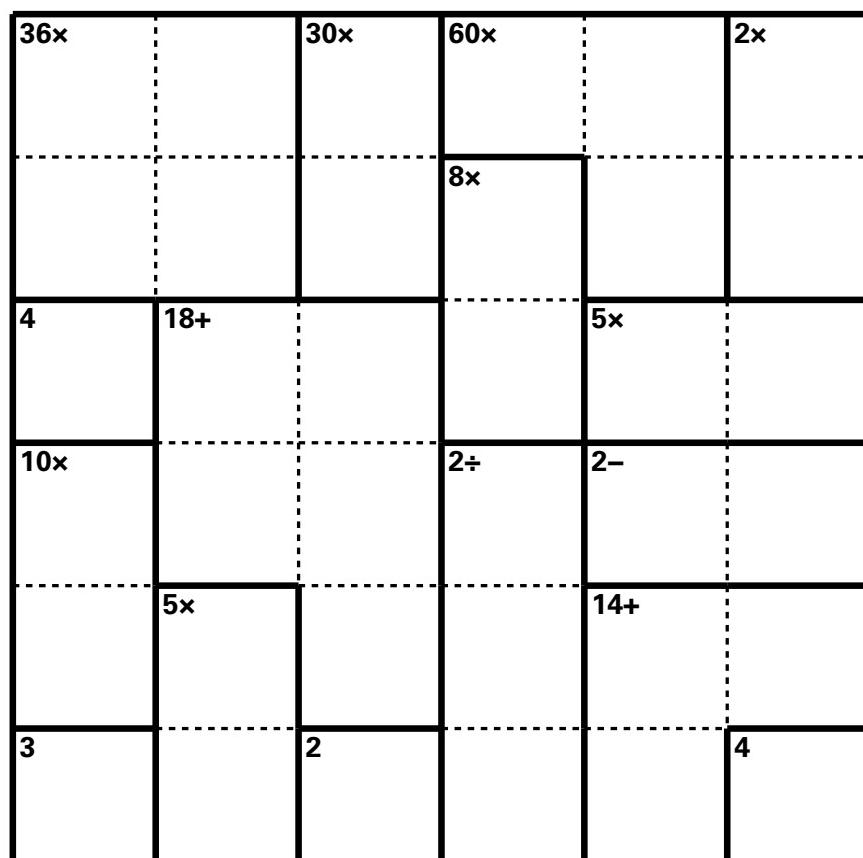
Solution, page 8



Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Techdoku

Solution, page 8



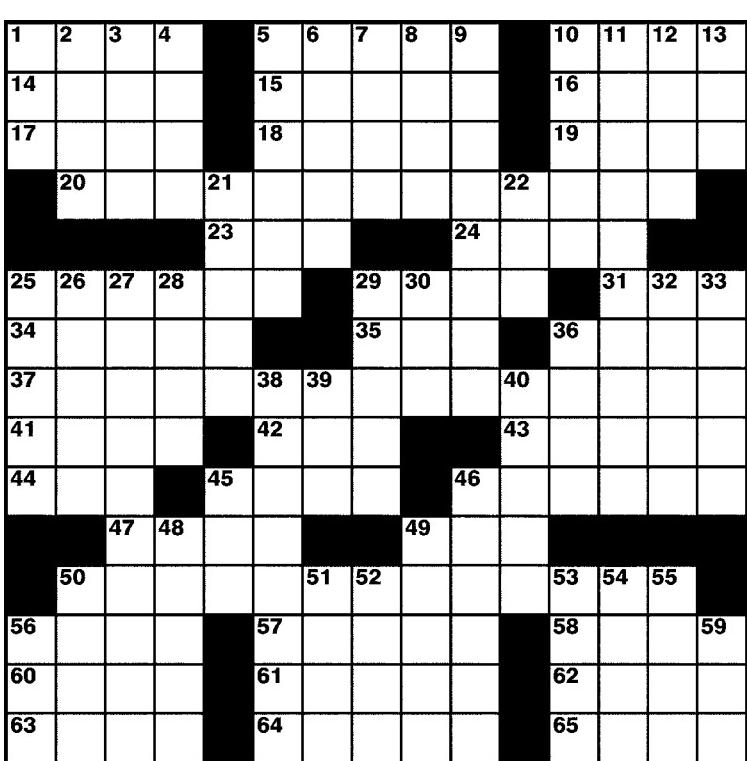
Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

Road Work

Solution, page 9

ACROSS

- 1 Poisonous snakes
5 "Get lost!"
10 Have a go __ (try)
14 Story line
15 Yes-man
16 Chemists' work areas
17 Kitchen-flooring piece
18 Watermelon coverings
19 Scandinavian furniture chain
20 British prime minister's address
23 Driver's licenses and such:
 Abbr.
24 Charged atoms
25 Heroic military pilot
29 Religious offshoot
31 Had dinner
34 In __ (hurrying)
35 Handheld organizer: Abbr.
36 Take the lid off
37 Los Angeles locale of a Lloyd Webber musical
41 Help with, as a crime
42 Debtor's letters
43 Poem



- | | |
|----------------------------|------------------------|
| 50 Underground coal source | 54 Pre-owned |
| 51 Whitish gemstone | 55 Make less difficult |
| 52 Three hours before noon | 56 Tight-lipped |
| 53 Birth-certificate entry | 59 Skillet |

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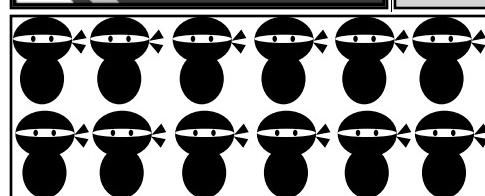
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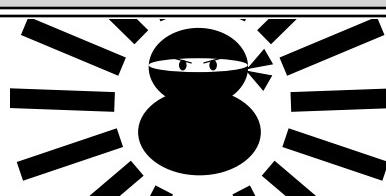
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 Jewish – Rabbi Michell Fisher
 Muslim – Sr. Hoda Elsharkawi
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Siegel: MIT's suicide rate around nation's Recent increase in visits to MH&C

Mental Health, from Page 1

graduates seen increased by 50 percent to 959 students, and the average length of treatment increased by 12 percent.

A smaller proportion of these students have needed to take medical leave from MIT, typically for psychiatric conditions. 72 undergraduate students took medical leave during the 2012-2013 year.

Siegel said that the suicide rate at MIT is around the nationwide average of 7.5 to 7.8 per 100,000 people.

Siegel was optimistic about the fact that he perceived communication between students improving over time. "We've seen that students are more open to talking with peers about difficulties, and willing to follow peer recommendations," said Siegel. He said about 80-85 percent of students who

came to MIT Medical for mental health reasons were self-referred. In addition, a large number of students participated in the annual Depression Screening event held by the Active Minds at MIT initiative on October 9. Siegel noted that "within the first two hours, the event filled intake consultations for two weeks."

However, he expressed concerns about the well-being of the student community in the context of the recent deaths. Siegel said that the deaths "contributed to a sense of unease in the minds of the community," and that they have made coping with stress and anxiety more difficult.

Siegel said he hopes that members of the campus community will be able to form a supportive network in times of need with the help of MIT MH&C. "We want to help people help each other."

New NASA admin *Obama nominates Newman to be new NASA deputy administrator*

Newman, from Page 1

Fellow. Newman earned three graduate degrees from MIT: two SM degrees in 1989, one in aeronautics and astronautics and the other in technology and policy, then a PhD in 1992 in aerospace biomedical engineering, according to MIT News.

Newman's research at MIT has included the development of a new spacesuit design that weighs less and provides a tighter fit to facilitate mobility. In addition, she has focused on computer modeling of human motion in conditions of very low gravity, as well as traveling

Solution to Sudoku from page 5

2	6	3	1	5	9	4	7	8
4	8	1	7	3	2	6	9	5
9	5	7	4	8	6	2	3	1
3	7	9	6	4	8	1	5	2
8	1	4	9	2	5	3	6	7
5	2	6	3	7	1	8	4	9
6	4	2	5	1	7	9	8	3
1	9	5	8	6	3	7	2	4
7	3	8	2	9	4	5	1	6

Solution to Techdoku from page 5

1	3	6	5	4	2
6	2	5	4	3	1
4	6	3	2	1	5
2	4	1	6	5	3
5	1	4	3	2	6
3	5	2	1	6	4

MIT Federal Credit Union Seeks Candidates for 2015 Board of Directors Election

Our members own MIT Federal Credit Union, and with that our member-elected, volunteer Board of Directors formulate and support decisions with our members' and the MIT Community's interest at heart.

MIT Federal Credit Union's nominating committee is currently seeking credit union members who are interested in serving on the Board of Directors. Two 3-year terms on the board will be open for the 2015 election in the spring.

The application deadline is Friday, November 14, 2014.

Visit mitfcu.org/home/about/boarddirectors to learn more about the MITFCU Board of Directors and their responsibilities.



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A member of Clowns@MIT uses the move "Water Gun" as a Squirtle during Friday's Pokemon Battle on Killian Court. The event was hosted as one of Clowns@MIT's many events to help students relieve stress and have fun.

VIVIAN HU—THE TECH

MIT Medical director steps down

After 14 years as the medical director of MIT Medical, William Ketty, M.D., will be stepping down. According to MIT News, the announcement was made by Executive Vice President and Treasurer Israel Ruiz SM '01 on Oct. 14 in an email to faculty and staff.

The medical director advises MIT's administration on Institute health concerns and oversees all of MIT Medical's clinical services.

Ruiz praised Ketty's leadership, writing in a statement, "During his time at MIT, Ketty has made a number of significant contributions to the Institute."

Ketty first joined MIT Medical in 1993 as an internist and endocrinologist before being appointed associate medical director in 1995 and medical

director in 2000.

Since 1982, Ketty has served as an assistant clinical professor of medicine in the Harvard-MIT Division of Health Sciences and Technology. He has taught Endocrinology and Introduction to the Care of Patients for several decades.

Recently, he has chaired the health subcommittee of the Employee Benefits Oversight Committee, which helped plan MIT's response to the Affordable Care Act.

Ketty will remain at MIT part-time after stepping down as medical director. His new responsibilities will include responding to new health care regulations and helping the Institute plan future health care benefits.

—Jennifer F. Switzer

High voter turnout in the Class of 2018 elections

Four of the six races for council positions were won by a margin of fewer than 30 votes

Elections, from Page 1

Zhou was pleased with the involvement from voters and candidates. "I think there was a lot of energy in these elections," she said. "I hope that it can sustain through all four years."

This year saw a few changes in the election process. The week of campaigning was moved further back, which Zhou thinks increased awareness of the elections. "The pushed-back timeline allowed for more people to be prepared and also allowed for more people to run," Zhou said.

The cap on campaign spending was also increased this year, according to Kevin Y. Yan '15, the Chair of the UA Election Commission. Whereas in previous years spending was capped "between 1 and 2 percent" of MIT's semester undergraduate tuition, the UA switched it to a percentage of the school's annual tuition this year, effectively doubling the limit. However, Yan notes that spending was in line with previous years and that most candidates' spending did not approach the limit.

The preferential voting system used by the UA also mistakenly

allowed for voters to choose the same candidate for a position multiple times. Yan says they will fix the bug on the website before the spring election for the rest of the Class Councils.

Many of the candidates found the campaigning process intense but manageable. Webb said he was not affected by the competition of the four other candidates. "The only person I was competing with was myself."

Webb comes from the suburbs of Atlanta and hopes to study either Course 2 or Course 6. A large part of his campaign strategy was

to prepare before campaign week even started, which he said allowed for him to get a head start and avoid overworking during the week. With the help of friends, he had posters up around the entire school starting as early as the Saturday morning before elections.

Spending less than \$100, much of which he raised from friends, Webb also printed 700 business cards with the phrase "Join the Webb" and attached candy to them. He then distributed them to students in the 8.01 classes in order to raise awareness for his campaign.

Webb believes the important part of campaigning, though, was "getting to know people personally." He visited every dorm except for Random Hall and talked to many of the freshmen.

Newly elected vice president Gomez comes from Sarasota, Florida and is interested in pursuing Courses 1 and 15. She decided to run for Class Council after meeting many freshmen through the MIT summer program Interphase. She was also on her high school's Class Council in high school.

Like Webb, Gomez campaigned by meeting as many freshmen as possible around campus. When it came to finding time to campaign, Gomez said, "It was actually very time-consuming so I'm glad it was just one week." Gomez joked she was happy with the length "for the sake of not failing [her] classes."

Rumen R. Dangovski '18 and Yuge Ji '18, who were elected social chairs, looked to "unify [the] class in a helpful, modest way" when

they chose to run, according to their email to *The Tech*.

When it came to campaigning, Dangovski and Ji said they "didn't campaign in the usual sense." Except for putting chalk in front of Lobby 7 for a day, they didn't feel the need to advertise themselves. Instead, they simply talked to people.

Now elected, Dangovski and Ji are looking to "get to know the rest of the UA Council and learn from their experiences." The entire Class Council has an on-campus retreat planned for this Thursday.

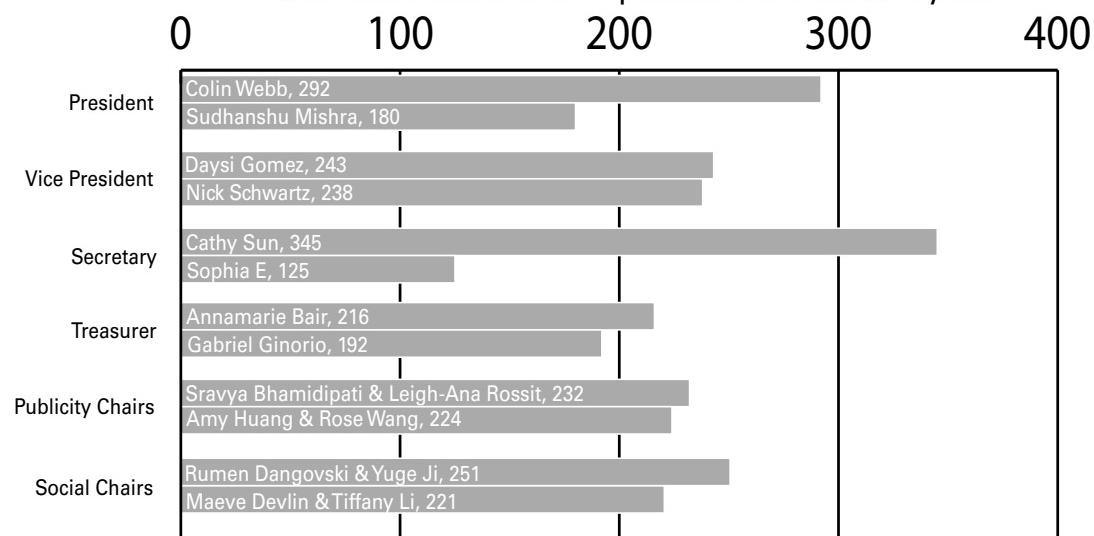
Webb is already brainstorming ideas for events he hopes to introduce. One idea is to start themed study breaks for the freshman class, such as ones centered on Thanksgiving or standup comedy. Additionally, both Webb and Gomez hope to go beyond social events and also organize community service projects.

Webb also plans to connect the freshman class with members of the alumni community. He mentioned how the Class of 2017 organized an event earlier this year in which they invited members from the Class of 1967 to a forum in which the alumni reflected on their experiences after MIT. Webb hopes to organize a similar event for the Classes of 2018 and 1968.

Finally, Webb hopes to implement periodic surveys to increase communication with the freshman class. "Being able to provide a venue for people to give their feedback will allow us to really represent our class and what our class wants to do," said Webb.

2018 Class Council Election Results

Total votes at the end of preferential election system



INFOGRAPHIC BY LENNY MARTINEZ AND JUSTINE CHENG

Solution to Crossword

from page 5

ASP	S	C	R	A	M	A	T	I	T
PLOT	T	O	A	D	Y	L	A	B	S
TITLE	R	I	N	D	S	I	E	K	E
DOWNINGSTREET	D	O	W	N	G	S	T	R	E
IDS	I	D	S	T	E	O	N	S	O
WARACE	S	E	C	E	T	A	T	E	A
ARUSH	A	R	U	S	H	P	D	A	W
SUNSET	S	U	N	S	E	B	O	U	L
ABET	T	B	O	U	L	E	V	E	R
TAR	T	R	O	T	W	A	N	T	E
RARE	R	A	R	E	P	A	D	E	D
MADISONAVENUE	M	A	D	I	S	O	N	A	V
MINIOPIN	M	I	N	I	O	P	I	N	E
UNDO	U	N	D	O	N	A	S	A	P
MESS	M	E	S	S	E	L	E	C	T

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MIT Symphony Orchestra kicked off this year's season Saturday night, playing Mozart's Symphony No. 36 'Linz Symphony,' followed by Sibelius' Symphony No. 2.

DANIEL MIRNY—THE TECH

Department of Chemical Engineering establishes new professorship

The Department of Chemical Engineering has recently announced the creation of the Raymond F. Baddour (1949) Chemical Engineering Professorship, a title meant for a distinguished faculty member within the department.

The professorship's namesake, Baddour, who is currently the Lammot du Pont Professor Emeritus of Chemical Engineering, was the head of the chemical engineering department from 1969 to 1976. He received his MS in chemical engineering in 1949 and his ScD from MIT in 1951. In 1970, he founded MIT's Environmental Laboratory and became its first director, according to an MIT News Office release.

As head of the chemical engineering department, Baddour expanded the department's programs in applied chemistry, bioengineering, and energy/environmental engineering. He also played an integral role in planning and funding the construction of the Ralph Landau Building (Building 66), the space now primarily occupied by Course

10.

Baddour has produced more than 65 publications, holds 16 patents, and has founded 16 companies including Amgen, a company dedicated to the development of biopharmaceuticals and biotechnology.

The department has named Professor Bernhardt L. Trout MS '90 as the first to receive this professorship. Trout is currently the director of the Novartis-MIT Center for Continuous Manufacturing and the co-chair of the Singapore-MIT Alliance Program on Chemical and Pharmaceutical Engineering.

Trout has published more than 150 papers and is the recipient of the 2014 Council for Chemical Collaboration Award and the 2014 AIChE Excellence in Process Development Research Award, according to MIT News. His research focuses on molecular engineering in biopharmaceutical formulation, pharmaceutical crystallization, and pharmaceutical manufacturing.

—Patricia Z. Dominguez

ASE pass rates up from previous years

Fewer students took biology ASE, but a higher percentage passed it

ASE, from Page 1

percent, and is close to the high of 51 percent for the Class of 2015.

Professor Dennis Kim, the Undergraduate Biology Academic Officer and Associate Professor in MIT's Department of Biology, acknowledged that there has been some "variability" in the Biology ASE passing rate throughout the years. He also said that while there were 93 takers last year, there were only 67 this year. The fluctuating number of takers may contribute to this variability, but he said, "The process for generating the Biology ASE was not different this year than it was from prior years."

While Kim said that the Biology ASE is meant to "reflect the material that's covered in a standard introductory 7.01 course," he strongly encouraged students to take one of the 7.01x courses.

"I think I myself could benefit from sitting in 7.016 hearing Angelika Amon talk about meiosis or 7.012 and hear Bob Weinberg talk about cancer," he said.

As usual, the most commonly taken ASEs were for General Institute Requirement (GIR) classes: 7.012 to 7.016 (Introductory Biology), 5.111 (Principles of Chemical Science), 18.01 (Single Variable Calculus), 18.02 (Multivariable Calculus), 8.01 (Classical Mechanics), and 8.02 (Electricity and Magnetism). Other common ASEs included 18.03 (Differential Equations) and 18.06 (Linear Algebra).

The Chemistry ASE proved to

be the hardest for the students, as only 17.9 percent passed, the lowest among the ASEs. This is slightly lower than last year's 21 percent, but higher than the 14 percent of previous years.

Hung Jui Huang '18, one of those who passed the test, said it would probably take more than 30 hours to study for the Chemistry ASE, and that the preparation still might not guarantee success. Huang added, "There is not enough online material for students to work on to prepare for the test. Some test problems are out of the class syllabus of online OCW (Open CourseWare)."

"I know some people who have also taken all OCW videos but didn't pass the Chemistry ASE. I also think unless you are a IChO (International Chemistry Olympiad) medalist, you have to take all the OCW videos to pass [the] Chemistry ASE, and it is just [a gamble]," he said.

The math ASEs — 18.01, 18.02, 18.03, and 18.06 — generally saw the best results, with pass rates of above 70 percent. Only the 18.01 ASE showed an unusually low passing rate — 49.2 percent. The pass rates of the math ASEs are historically the highest, with only a handful of students not passing the exam in some previous years.

Sze Nga Wong '18, who passed both math GIR ASEs and the 8.01 ASE, explained that OCW helped her prepare for the tests.

She added, "I would not say any of the tests was super easy, because there were always materials outside the regular high school syllabus."

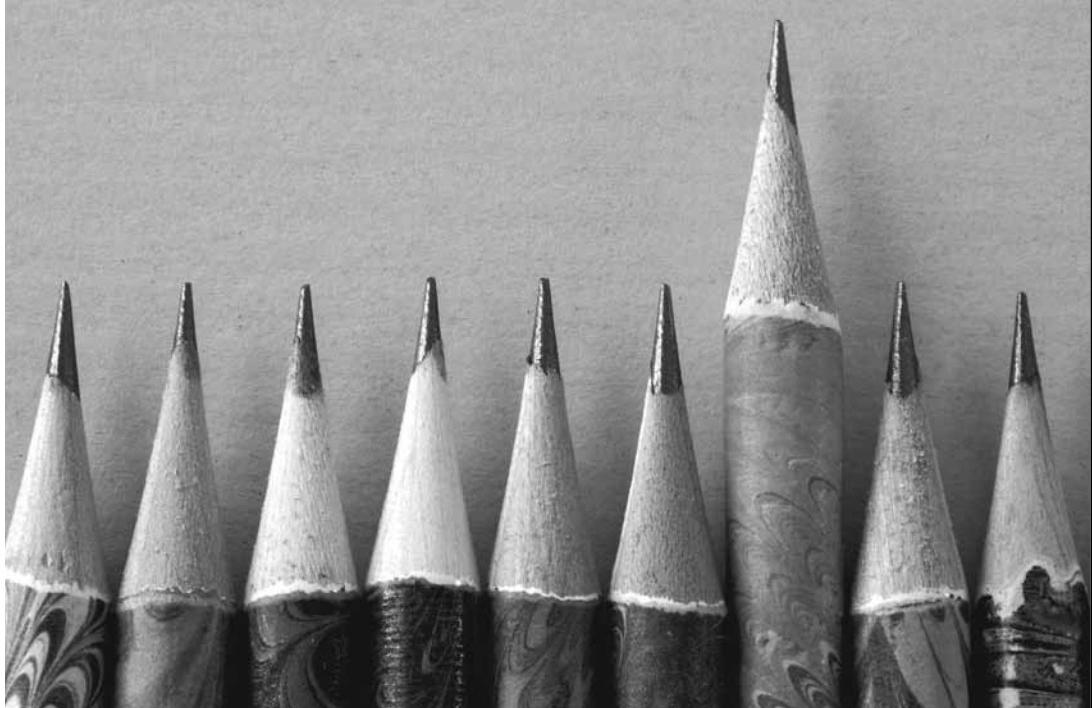
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Isabella L. Pecorari '18 battles a Smith College player for control of the ball during MIT's 2-0 victory on Saturday afternoon. The Pioneers almost scored early in the game when a shot careened off the crossbar, but only the Engineers found the back of the net and with the win brought their record to 10-3-2.

ALEXANDER C. BOST—THE TECH

MIT pulls three-peat with a perfect ledger

Women's volleyball team wins the MIT Quad for a total of eight times

By Mindy Brauer

DAPER STAFF

For the third year in a row and eighth time in tournament history the MIT women's volleyball team won the MIT

TQuad Tournament on Saturday, October 18. The Engineers (22-2) took top honors with a 3-0 ledger, followed by Colby College, SUNY Oneonta, and Western New England University. Megan E. Gebhard '17 was named the Tournament MVP while Tori L. Wuthrich '17 earned a spot on the All-Tournament Team.

In addition to recording the program's 19th straight 20-win season, MIT also saw setter Nicole C. Gagnier '15 surpass the 3,000 assist mark. She is the fifth player all-time to reach this milestone and the first since Amanda Morris '08 during the 2007 season.

The Engineers opened the tournament by outlasting SUNY Oneonta, 25-17, 22-25, 22-25, 25-19, 15-7, on Friday night. Gebhard paced the squad with 17 kills and added three blocks while Jennifer L. Astrachan '15 posted 14 kills and four aces. Gagnier tallied 37 assists, 13 digs, and eight blocks as Jennifer A. Glerum '17 totaled a team-high 23 digs. Wuthrich collected 15 digs followed by

12 from freshman Clare Farley (La Jolla, Calif.) who also earned two aces. Lisette G. Tellez '18 rounded out the back row with nine digs while Allison A. Davanzo '18 and Meryl E. Gibbs '16 notched six and four blocks, respectively.

On Saturday morning, the Engineers blanked Colby, 27-25, 25-21, 32-30. Gebhard led the way with a match-high 18 kills and tacked on two blocks as Astrachan totaled 13 kills, six digs, and two blocks. Gagnier earned a double-double on 39 assists and 14 digs while Wuthrich collected 15 digs. Farley had eight digs as Tellez notched six of her own. Glerum came up with six digs and a team-best three aces while Gibbs and Morgan R. Stewart '15 both chipped in three blocks.

In the finale, MIT defeated Western New England, 25-16, 25-11, 21-25, 26-24. Astrachan powered the attack with 19 kills and a .405 hitting performance while Gebhard generated 16 kills, a .364 hitting effort, and two blocks. Gagnier tallied 44 assists, eight digs, and two blocks as Davanzo recorded five kills, four blocks, and three aces. Wuthrich led all players with 17 digs, followed by 13 from Farley. Glerum wrapped up the weekend with 12 digs and three aces.

The Engineers return to NEWMAC play on Tuesday, Oct. 21 when they host Babson College.



Nicole C. Gagnier '15 dives to save a point during a 3-2 victory over SUNY Oneonta on Friday evening. The game was the first of three in the MIT Quad Tournament, which the Engineers won for the third year in a row.

UPCOMING HOME EVENTS

Tuesday, October 21

Field Hockey vs. Wellesley College

6 p.m., Steinbrenner Stadium

Women's Volleyball vs. Babson College

7 p.m., Rockwell Cage

Thursday, October 23

Sailing vs. Midweek Firefly Invite

4 p.m., Charles River



Molly C. McNamara '16 dribbles the ball down field during MIT's game against Smith College on Saturday. Smith took a 1-0 lead into halftime, but staunch defending and two goals by Emily Penn '18 in the second half were enough for MIT to secure a 2-1 victory.

MIT keeps up solid form with 2-0 win

Women's soccer team tops Smith

By Matthew Noonan

DAPER STAFF

Morgan K. Moroi '16 and Olivia M. Struckman '18 each located the back of the Smith College net as

MIT defeated the Pioneers, 2-0, on Saturday, October 18 at Roberts Field at Steinbrenner Stadium in New England Women's and Men's Athletic Conference (NEWMAC) play. With the win, MIT improves to 10-3-2 overall and 6-0-1 in the conference, while Smith falls to 5-6-1 and 3-3-0.

Smith's Jackie Foody commenced the contest with an early goal-scoring opportunity when

she drilled a shot from the far side that deflected off the cross bar and landed in the middle of the box. MIT's defense cleared the ball out of the zone and didn't allow the Pioneers to register another shot until late in the first half.

Moroi put MIT on the board with her sixth goal of the season when she pounced on a loose ball in the box and directed a shot past Smith's goalkeeper Shelby Hall at 23:25. Struckman, who led the Engineers down the field prior to their goal, sent a cross into the box that was deflected off Hall's hands and landed on Moroi's foot.

MIT, which led 1-0 at the break, attempted to add to their lead with

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